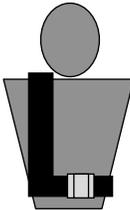


# **2013 State of Colorado Distracted Driver Study**

**Colorado Department of  
Transportation**

**SEAT BELT  
STUDY**



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**Colorado  
State  
University**

**INSTITUTE OF TRANSPORTATION MANAGEMENT**

# EXECUTIVE SUMMARY

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The Institute of Transportation Management of Colorado State University conducted a distracted driver study in the State of Colorado from April 28 through May 4, 2013. The study was sponsored by the Colorado Department of Transportation, Office of Transportation Safety and involved observations at 88 sites in 12 counties across the State of Colorado. The survey included drivers of cars, vans, sport utility vehicles (SUVs), and light trucks.

A total of 24,022 drivers were observed during the study. Of this number, 14,428 were male and 9,774 female. Overall, 15.6% of the drivers were found to be distracted.

Observational data were entered into a SAS system database for computation and review. The survey data and subsequent analyses yielded the following rankings of driver distractions from the most frequently occurring distraction to the least frequent.

<b>Rank Order (Males and Females)</b>	<b>Distraction</b>
1	Cell Phone (talking)
2	Drinking/Eating
3	Cell Phone (texting)
4	Smoking
5	Reaching for Objects
6	Grooming (applying makeup/shaving, etc.)
7	Passengers (turning head, reaching)
8	Dashboard (tuning radio, adjusting heat/air)
9	Other
10	Pets (holding, attending, feeding, petting)
11	Reading (newspaper, book, E-tablet, etc.)
12	Adjusting Clothing/Tie, etc.
13	Outside Distraction (accident, signage, etc.)
14	Children (holding, turning head, reaching)
15	Headphones/Ear Buds

There was only a slight difference between the genders in terms of the rank order of the various distractions. Men tended to smoke more when driving while women were more apt to text and more likely to be distracted by grooming activities.

<b>Rank Order (Males)</b>	<b>Distraction</b>
1	Cell Phone (talking)
2	Drinking/Eating
3	Smoking
4	Cell Phone (texting)
5	Reaching for Objects
6	Passengers (turning head, reaching)
7	Dashboard (tuning radio, adjusting heat/air)
8	Other
9	Grooming (applying makeup/shaving, etc.)
10	Pets (holding, attending, feeding, petting)
11	Outside Distraction (accident, signage, etc.)
12	Adjusting Clothing/Tie, etc.
13	Reading (newspaper, book, E-tablet, etc.)
14	Headphones/Ear Buds
15	Children (holding, turning head, reaching)

<b>Rank Order (Females)</b>	<b>Distraction</b>
1	Cell Phone (talking)
2	Drinking/Eating
3	Cell Phone (texting)
4	Smoking
5	Reaching for Objects
6	Grooming (applying makeup/shaving, etc.)
7	Passengers (turning head, reaching)
8	Dashboard (tuning radio, adjusting heat/air)
9	Other
10	Pets (holding, attending, feeding, petting)
11	Children (holding, turning head, reaching)
12	Reading (newspaper, book, E-tablet, etc.)
13	Adjusting Clothing/Tie, etc.
14	Outside Distraction (accident, signage, etc.)
15	Headphones/Ear Buds

Talking on cell phones is clearly the most common distraction at 7.4%. The next most frequent distraction at 2.8% is drinking/eating. The remaining 5.4% of the 15.67% total is spread over 13 other identified distractions.

# ADMINISTRATIVE EVALUATION

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Dr. G.J. Francis served as Principal Investigator, Burt Deines as Project Coordinator, Steve Medland as Data Coordinator, and Felicia Zamora as Field Administrator for this distracted driver study. Observers and supervisors were trained by the ITM team in observation and recording methods in order to properly conduct the field survey and collect data. The need for consistency and accuracy in the process of data collection was emphasized in the training and pre-survey phase of the study.

Distracted driver data were collected from 88 separate sites from April 28 through May 4, 2013. With the analyses of the data and the submission of this report, all project tasks and requirements were met within the parameters of the contract.

The majority of the observers gathering data in this study were retired Colorado State Highway Patrol Officers. Because of their familiarity with interstate and state highways, local and county roads, and safety procedures, many potential location and safety problems were minimized or eliminated. The experience and expertise of the retired Highway Patrolmen strengthened the validity and the reliability of the results of the survey.

James zumBrunnen of the Graybill Statistical Laboratory in the College of Natural Sciences at Colorado State University served as the lead statistician in the analysis of the data. Mr. zumBrunnen and others within the Laboratory assumed major roles in the research design and methodology which gave the statistical analyses independence from the survey process.

## **Objectives of the Study**

The primary objectives of the study were to:

- Conduct a distracted driver survey within the State of Colorado to estimate the number and types of distractions for drivers of cars, vans, SUVs, and light trucks.
- Design a sampling procedure to allow the optimal selection of survey sites that would be statistically representative of State usage figures.
- Design a methodology to minimize sampling error and variability.
- Complete the study within budget and file a final report.

# SURVEY DESIGN AND METHODOLOGY

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The 2013 Colorado Distracted Driver Usage Study was designed to meet all the requirements established by the Uniform Criteria for State Observational Surveys of Seat Belt Use issued by the National Highway Traffic Safety Administration (NHTSA) Final Rule, Federal Register, Vol. 76, No. 63, April 1, 2011.

1. Sites were selected from the statewide probability-based sample from the population of road segments within each county.
2. The sample data were collected through direct observation at the predetermined sites by qualified and trained observers. Observation times were assigned and rescheduled if weather interfered or other conditions existed which made observations at a particular site unsafe.
3. The population of interest was the driver of cars, vans, SUVs, and light trucks.
4. Observations were conducted in daylight hours from April 28 through May 4, 2013 between the hours of 7:00 AM and 6:00 PM.
5. Observation start times were staggered in order to obtain a representative sample from rush hour and non-rush hour time frames.
6. Observational data were gathered and recorded on counting sheets. The data were then transcribed to create a digital record and entered onto field summary forms, which served as input into SAS programs for data reduction.

The distracted driver study was used as a subset of the statewide probability-based sample of road segments that made use of the pre-mobilization study design. Some rural sites were replaced with randomly selected sites in counties with a mix of urban and rural populations in order to have a greater volume of traffic to observe.

The research design involved using sites from the statewide/pre-mobilization studies stratified systemic PPS sample of data collection sites described below:

1. Fatality Analysis Reporting System (FARS) data for the period of 2007 to 2009 were used to determine the average number of crash-related fatalities per county. For the pre-mobilization study, it was determined that 29 counties accounted for 85% of Colorado's total crash-related fatalities. From these 29 counties, the top 11 counties in terms of fatalities plus one additional "rural" county (Montrose) were selected to comprise the sample frame and were used as strata for sampling road

segments. Selection of Montrose was determined in part by availability of qualified observers and budget limitations.

2. Road segments in the statewide sample were selected systematically with probability proportional to size (PPS) from all segments in the stratified counties. The road segments were serpentine sorted by latitude and longitude within counties, which makes the sampling spatially more uniform within counties.

For the purposes of this survey, an observational site was defined as a specific road intersection or interstate ramp where observations take place. Observations were conducted at each site for 40 minutes of each hour between the hours of 7:00 a.m. and 6:00 p.m. for the week of April 28 through May 4. Twenty minutes were allowed for recording data and moving to the next observation site.

The survey was designed to produce an overall estimate of the number of distracted drivers and the types of distractions that most frequently occur. Roads within the counties were grouped using the State's classification of "major" roads and "local" roads. A major road is determined by the road's length and volume of traffic. All road segments in the sample counties were identified, and a sample of these segments was selected for observation.

A total of 88 sites (road segments) on major roads and local roads was determined to be a representative sample based upon previous surveys. When possible, traffic was observed from inside the sample road segment at or near the point where the traffic was leaving the segment (for safety reasons).

### **Determination of Sample Size**

Sample size determination was, in large measure, governed by time constraints and the precision requirement of the study ( $SE < 2.5\%$ ). A decision as to how many roadways to select and assign for observation during the observation period required a balance between issues of statistical reliability and observer productivity. Statistical theory, which considers correlations and the need for independent observation, would suggest that the number of roadway locations be as large as possible. However, there was a practical need to select an optimal number of road segments for study so that observers would not spend inordinate amounts of time traveling from site to site. With all of those issues given consideration as well as the needs of the contracting organizations, a total sample of 88 observational time periods and sites were selected. The 88 sites were located within 12 of the counties sampled in the pre-mobilization study. These 12 counties accounted for 64.5% of the fatalities in the State according to the Fatality Analysis Reporting System 2007-2009.

## **Estimation**

The basic estimate derived from this Colorado Distracted Driver Study is the estimate of distractions for drivers of cars, vans, sport utility vehicles (SUVs), and light trucks.

The percentage of distracted drivers for Colorado was determined by using a survey sampling methodology to obtain information about a large population of Colorado drivers selecting and measuring a sample of that population. Fundamental to the analysis of this survey is the concept of cluster analysis, a collection of statistical methods that can be used to assign cases to groups (clusters). Group members share certain properties in common, and it is therefore assumed that the resultant classifications will provide insight into the frequency of various types of distractions as well as the overall percentage estimate of distracted drivers for the State of Colorado.

# SURVEY RESULTS

The 2013 State of Colorado Distracted Driver Study was conducted at 88 sites. The sample came from the statewide survey design which was developed in compliance with the Uniform Criteria for State Observational Surveys of Seat Belt Use issued by the National Highway Traffic Safety Administration (NHTSA) Final Rule, Federal Register, Vol. 76, No. 63, April 1, 2011. Driver distractions and seat belt usage data were collected from these 88 sites in 12 counties from April 28 through May 4, 2013.

There were 24,022 vehicle observations in this distracted driver study. The data were recorded, tabulated, and analyzed with assistance from the Graybill Statistical Laboratory of the College of Natural Sciences. As shown in Table 1, talking on a cell phone was the most frequent distraction at 7.4%. Drinking and eating while driving was the next most common occurring distraction at 2.8% of all drivers. Texting and smoking were 1.7% and 1.6%, respectively.

**Table 1: Ratio Analysis for Each of 15 Distractions (Males/Females)**

Rank Order	Distraction	% Ratio	Std Error	Confidence Interval	
				Lower 95% Limit	Upper 95% Limit
1	Cell Phone (talking)	7.4	0.3	6.7	8.1
2	Drinking/Eating	2.8	0.3	2.3	3.4
3	Cell Phone (texting)	1.7	0.2	1.3	2.0
4	Smoking	1.6	0.2	1.3	1.9
5	Reaching for Objects	0.5	0.1	0.4	0.7
6	Grooming (applying makeup/shaving, etc.)	0.3	0.1	0.2	0.4
7	Passengers (turning head, reaching)	0.3	0.0	0.2	0.4
8	Dashboard (tuning radio, adjusting heat/air)	0.3	0.0	0.2	0.4
9	Other	0.2	0.0	0.1	0.3
10	Pets (holding, attending, feeding, petting)	0.2	0.0	0.1	0.2
11	Reading (newspaper, book, E-tablet, etc.)	0.1	0.0	0.1	0.1
12	Adjusting Clothing/Tie, etc.	0.1	0.0	0.0	0.1
13	Outside Distraction (accident, signage, etc.)	0.1	0.0	0.0	0.1
14	Children (holding, turning head, reaching)	0.1	0.0	0.0	0.1
15	Headphones/Ear Buds	0.0	0.0	0.0	0.1

Figure 1 illustrates the relative differences in the frequency of the various distractions for males and females combined.

Figure 1

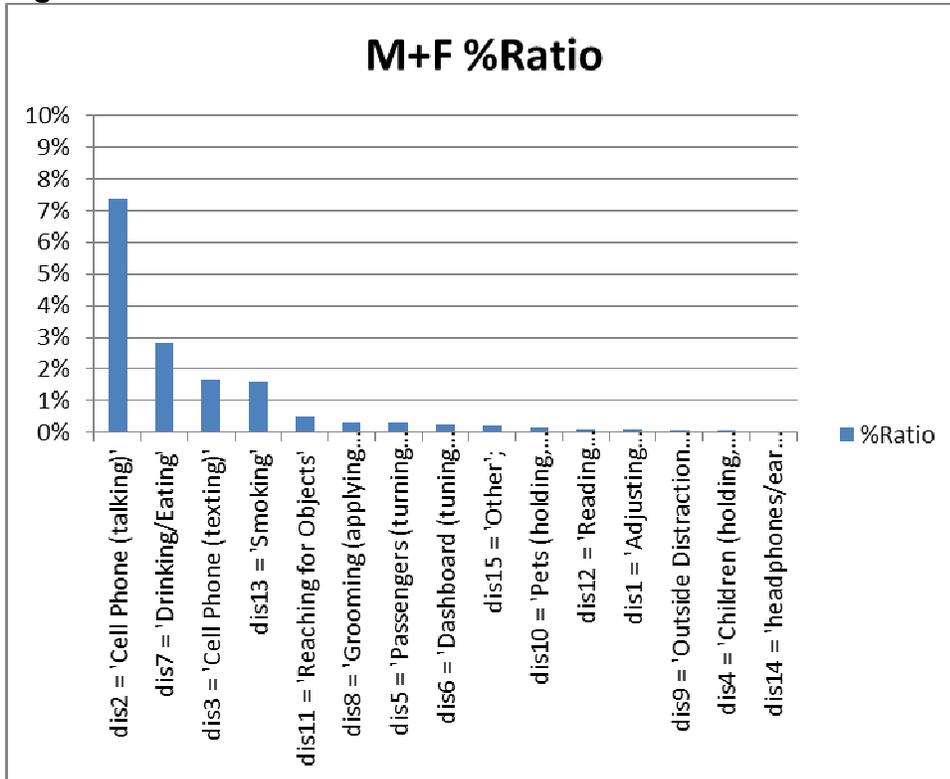


Table 2 provides a rank ordering of distractions for male drivers. While the top two distractions of talking on the cell phone and eating/drinking are the same as the overall rankings, the third most common distraction for males is smoking.

**Table 2: Ratio Analysis for Each of 15 Distractions (Males)**

Rank Order	Distraction	% Ratio	Std Error	Confidence Interval	
				Lower 95% Limit	Upper 95% Limit
1	Cell Phone (talking)	6.2	0.4	5.4	7.0
2	Drinking/Eating	2.5	0.3	1.9	3.0
3	Smoking	1.6	0.2	1.3	2.0
4	Cell Phone (texting)	1.4	0.1	1.1	1.7
5	Reaching for Objects	0.4	0.1	0.3	0.5
6	Passengers (turning head, reaching)	0.3	0.1	0.2	0.4
7	Dashboard (tuning radio, adjusting heat/air)	0.3	0.1	0.2	0.4
8	Other	0.2	0.0	0.1	0.3
9	Grooming (applying makeup/shaving, etc.)	0.2	0.0	0.1	0.2
10	Pets (holding, attending, feeding, petting)	0.2	0.0	0.1	0.2
11	Outside Distraction (accident, signage, etc.)	0.1	0.0	0.0	0.2
12	Adjusting Clothing/Tie, etc.	0.1	0.0	0.0	0.1
13	Reading (newspaper, book, E-tablet, etc.)	0.1	0.0	0.0	0.1
14	Headphones/Ear Buds	0.1	0.0	0.0	0.1
15	Children (holding, turning head, reaching)	0.0	0.0	0.0	0.1

Figure 2 presents a visual comparison of the differences in the frequency of the distractions for male drivers.

Figure 2

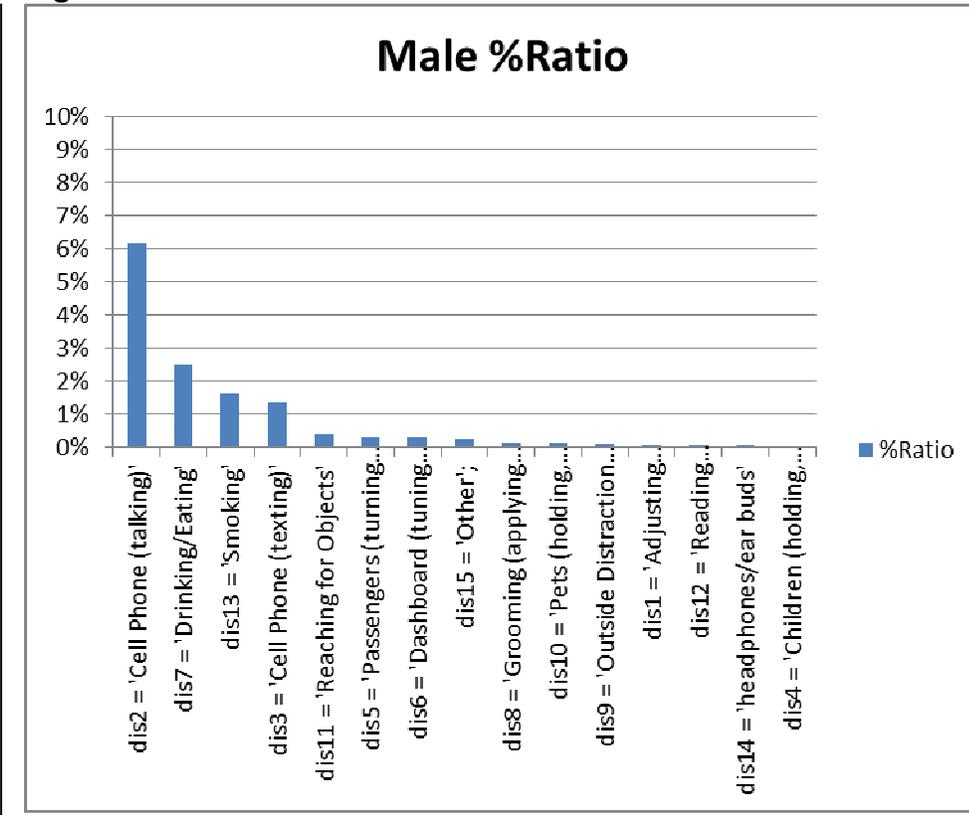


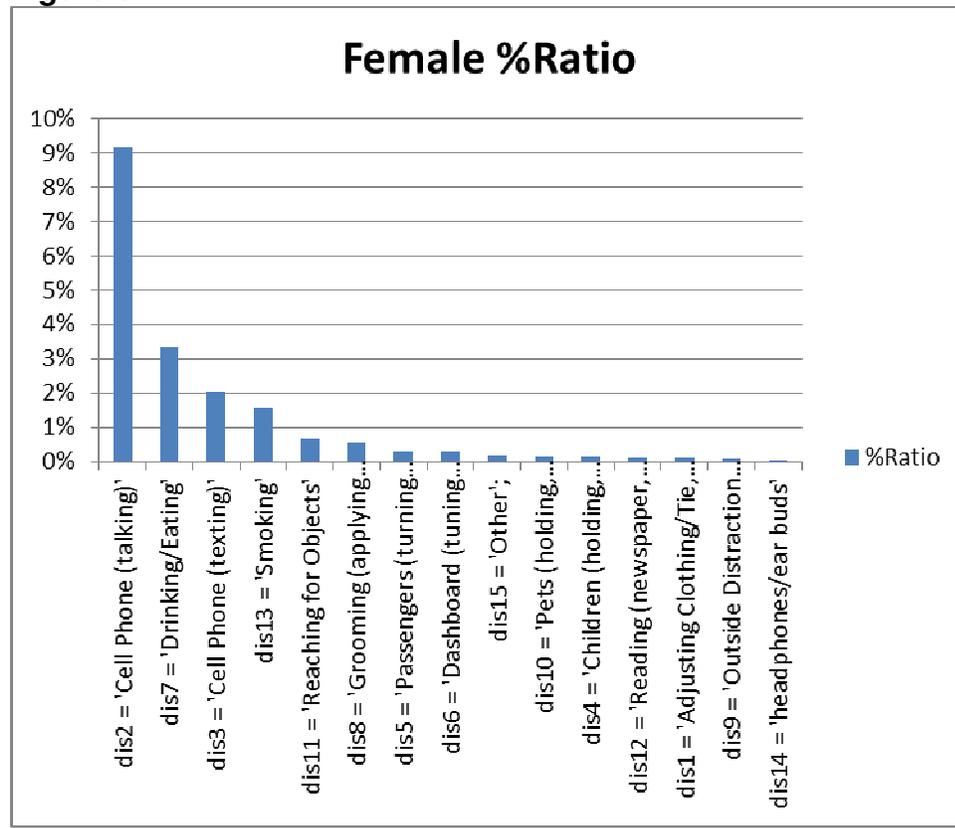
Table 3 is a listing of distractions for female drivers in order of their frequency. Females have a higher percentage of drivers who talk and text on cell phones than males. The percentage of females smoking while driving is the same as males, but the ranking is one level lower at fourth.

**Table 3: Ratio Analysis for Each of 15 Distractions (Females)**

Rank Order	Distraction	% Ratio	Std Error	Confidence Interval	
				Lower 95% Limit	Upper 95% Limit
1	Cell Phone (talking)	9.2	0.4	8.4	9.9
2	Drinking/Eating	3.3	0.4	2.6	4.1
3	Cell Phone (texting)	2.0	0.2	1.6	2.5
4	Smoking	1.6	0.2	1.3	1.9
5	Reaching for Objects	0.7	0.1	0.4	0.9
6	Grooming (applying makeup/shaving, etc.)	0.6	0.1	0.4	0.8
7	Passengers (turning head, reaching)	0.3	0.1	0.2	0.4
8	Dashboard (tuning radio, adjusting heat/air)	0.3	0.1	0.2	0.4
9	Other	0.2	0.0	0.1	0.3
10	Pets (holding, attending, feeding, petting)	0.2	0.0	0.1	0.3
11	Children (holding, turning head, reaching)	0.2	0.0	0.1	0.2
12	Reading (newspaper, book, E-tablet, etc.)	0.1	0.0	0.1	0.2
13	Adjusting Clothing/Tie, etc.	0.1	0.0	0.0	0.2
14	Outside Distraction (accident, signage, etc.)	0.1	0.0	0.0	0.1
15	Headphones/Ear Buds	0.0	0.0	0.0	0.1

Figure 3 illustrates the relative differences in the rank order of distractions for females.

**Figure 3**



Tables 4 and 5 provide an overview of the percentage of distracted and non-distracted drivers by county. The counties above the overall average for distracted drivers (15.6%) include Adams (26.9%), Boulder (16.9%), Mesa (26.4%), Montrose (17.1%), and Weld (16.9%). Although slightly higher than the overall average, Denver and Jefferson counties were statistically the same as the average at 15.8% and 16.0%, respectively. It should be noted that the standard error of 7.8 for Mesa County indicates that the sample size was too small to give a representative indication of the percentage of distracted drivers.

**Table 4: County Ratio Analysis for Male and Female Distracted Drivers.**

	Combined Males/Females				Males				Females			
			Confidence Interval				Confidence Interval				Confidence Interval	
	% Ratio	Std Error	Lower 95% Limit	Upper 95% Limit	% Ratio	Std Error	Lower 95% Limit	Upper 95% Limit	% Ratio	Std Error	Lower 95% Limit	Upper 95% Limit
<b>Overall Average</b>	15.6	0.8	14.1	17.2	13.6	0.8	12.0	15.2	18.5	0.8	16.9	20.2
<b>County</b>												
Adams	26.9	2.9	21.2	32.6	24.2	3.0	18.3	30.1	31.7	2.9	25.9	37.5
Arapahoe	13.8	0.8	12.3	15.4	11.3	0.9	9.4	13.1	16.9	1.5	13.8	20.0
Boulder	16.9	1.9	13.1	20.7	14.4	2.1	10.2	18.6	20.4	1.6	17.2	23.7
Denver	15.8	0.8	14.3	17.3	14.5	0.7	13.1	15.8	17.6	1.3	15.0	20.1
Douglas	11.9	0.4	11.1	12.7	7.9	0.8	6.4	9.5	17.1	1.8	13.4	20.8
El Paso	14.1	0.9	12.3	16.0	12.8	0.8	11.2	14.4	16.4	1.4	13.5	19.2
Jefferson	16.0	1.3	13.5	18.6	13.4	1.2	11.1	15.7	19.5	1.6	16.4	22.7
Larimer	8.1	1.4	5.3	10.9	6.8	1.5	3.8	9.9	10.0	1.5	7.0	12.9
Mesa*	26.4	7.8	10.9	42.0	26.7	9.2	8.4	45.0	26.2	6.4	13.5	38.8
Montrose	17.1	2.9	11.3	22.9	16.4	2.9	10.7	22.2	18.3	3.1	12.2	24.4
Pueblo	10.9	1.2	8.5	13.2	7.7	1.3	5.0	10.4	16.2	0.1	14.3	18.2
Weld	16.9	1.3	14.4	19.4	15.7	1.9	12.0	19.5	18.4	1.6	15.2	21.6

**Table 5: County Ratio Analysis for Male and Female Not Distracted Drivers.**

	Males				Females			
			Confidence Interval				Confidence Interval	
	% Ratio	Std Error	Lower 95% Limit	Upper 95% Limit	% Ratio	Std Error	Lower 95% Limit	Upper 95% Limit
<b>Overall Average</b>	86.4	0.7	84.8	88.0	81.4	0.8	79.8	83.1
<b>County</b>								
Adams	75.8	0.3	69.9	81.7	68.3	2.9	62.5	74.1
Arapahoe	88.7	0.9	86.9	90.5	83.1	1.5	80.0	86.1
Boulder	85.6	2.1	81.4	89.8	79.5	1.6	76.3	82.8
Denver	85.5	0.7	84.2	86.8	82.4	1.3	79.8	85.0
Douglas	92.0	0.8	90.5	93.6	82.8	1.9	79.1	86.5
El Paso	87.2	0.8	85.5	88.8	83.6	1.4	80.7	86.5
Jefferson	86.5	1.1	84.2	88.8	80.5	1.6	77.3	83.6
Larimer	93.1	1.5	90.1	96.1	90.0	1.5	87.1	93.0
Mesa*	73.3	9.2	55.1	91.6	73.8	6.4	61.1	86.5
Montrose	83.6	2.9	77.8	89.3	81.7	3.1	75.6	87.8
Pueblo	92.3	1.3	89.6	95.0	83.8	1.0	81.8	85.7
Weld	84.3	1.9	80.5	88.0	81.6	1.6	78.4	84.8

\*Mesa County indicates that the sample size was too small to give a representative indication of the percentage of distracted and not distracted drivers.

As shown in Table 6, seat belt usage does not appear to be a determinant as to whether or not a person will be distracted while driving. While there is not necessarily a correlation between seat belt usage and not being distracted, a low seat belt usage combined with a relatively high percentage of distracted drivers is an indication of the incidence of unsafe driving practices. Of the counties sampled, Adams and Montrose counties are among the highest in percentage of distracted drivers (26.9% and 17.1%, respectively) and the lowest in seat belt usage.

Douglas and Larimer counties are the two counties with the combined lowest rates of distracted drivers (11.9% and 8.1, respectively) (Table 4) and the highest seat belt usage among not distracted drivers (91.4% and 90.9%, respectively) (Table 6).

**Table 6: County Ratio Analysis for Distracted and Not Distracted Drivers with Seat Belts.**

	DISTRACTED WITH SEAT BELT				NOT DISTRACTED WITH SEAT BELT			
			Confidence Interval				Confidence Interval	
	% Ratio	Std Error	Lower 95% Limit	Upper 95% Limit	% Ratio	Std Error	Lower 95% Limit	Upper 95% Limit
<b>Overall Average</b>	83.9	1.4	81.1	86.8	82.9	0.9	80.9	84.9
<b>County</b>								
Adams	73.3	3.9	65.5	81.0	71.1	2.8	65.5	76.7
Arapahoe	91.3	1.6	88.1	94.4	82.6	1.9	78.8	86.4
Boulder	86.7	2.2	82.4	91.0	84.3	0.6	83.1	85.4
Denver	97.9	0.6	96.6	99.1	89.1	1.4	86.4	91.9
Douglas	92.6	2.0	88.6	96.7	91.4	0.6	90.3	92.6
El Paso	81.3	2.9	75.4	87.0	76.7	3.4	70.0	83.4
Jefferson	79.9	2.2	75.5	84.3	84.8	1.2	82.3	87.2
Larimer	89.9	3.4	83.2	96.6	90.9	0.9	89.0	92.8
Mesa	98.8	0.9	97.0	100.7	90.1	4.3	81.6	98.6
Montrose	75.8	4.6	66.7	84.9	63.9	1.9	60.0	67.8
Pueblo	72.8	5.6	61.7	83.8	73.9	2.5	68.9	78.9
Weld	83.2	2.1	79.0	87.4	87.0	1.1	84.9	89.2

Table 7 compares male and female seat belt usage and frequency of distraction by county. The data is consistent with other seat belt studies conducted in Colorado where seat belt usage by gender was included. Females tend to wear seat belts more regularly than males but also have a slightly higher percentage of distracted drivers.

**Table 7: County Ratio Analysis for Distracted Males and Females with Seat Belts.**

	DISTRACTED MALES WITH SEAT BELTS				DISTRACTED FEMALES WITH SEAT BELTS			
			Confidence Interval				Confidence Interval	
	% Ratio	Std Error	Lower 95% Limit	Upper 95% Limit	% Ratio	Std Error	Lower 95% Limit	Upper 95% Limit
<b>Overall Average</b>	81.2	1.7	77.8	84.6	86.9	1.4	84.2	89.6
<b>County</b>								
Adams	69.7	3.4	62.9	76.5	78.2	4.7	68.8	87.5
Arapahoe	89.5	3.6	82.3	96.7	92.7	1.2	90.2	95.1
Boulder	89.0	2.4	84.3	93.8	84.5	2.2	80.1	88.8
Denver	97.1	0.8	95.5	98.7	98.8	0.6	97.6	99.9
Douglas	83.3	4.3	74.8	91.8	98.3	1.6	95.1	101.5
El Paso	79.6	3.4	72.9	86.3	83.3	3.0	77.3	89.3
Jefferson	75.5	3.2	69.0	81.9	84.1	2.7	78.6	89.5
Larimer	90.3	3.8	82.8	97.8	89.5	4.9	79.8	99.2
Mesa*	100.0	0.0	100.0	100.0	97.4	2.2	93.1	101.8
Montrose	66.7	5.8	55.1	78.2	89.5	2.5	84.6	94.4
Pueblo	62.5	5.1	52.3	72.6	81.0	5.8	69.4	92.6
Weld	78.2	3.5	71.2	85.1	88.7	3.7	81.3	96.2

\*Mesa County indicates that the sample size was too small to give a representative indication of the percentage of distracted and not distracted drivers.

## **Analysis**

The PROC SURVEYMEANS procedure of SAS 9.3 was used to perform statistical analysis of the survey data. For county estimates, county was included as a domain variable. The SURVEYMEANS procedure computes ratio estimates and provides standard errors and confidence intervals for the ratios and for any specified domain analysis.

Using this procedure, the percentage of distracted drivers was estimated along with a determination of the standard errors and coefficients of variation. The survey sample included counties (12) that accounted for 64.5% of the fatalities reported in the Fatality Analysis Reporting System (FARS) 2007-2009. Although the sample was drawn primarily from the Front Range with some representation of the Western Slope, several counties in the study are considered to have a mix of urban and rural populations. Thus, this survey was judged to be a representative sample from the statewide study to allow estimates of distracted drivers in the counties included in the study and provide an approximation of the projected statewide rates.

# CONCLUSIONS

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The survey of 24,022 vehicles at 88 sites in 12 counties provided an adequate sample to project approximations of the percentage of distracted drivers in Colorado. The overall rate of distracted drivers was estimated to be 15.6% with a lower 95% CI limit of 14.1% and an upper limit of 17.2%. A standard error of 0.8% was well within the NHSTA established guidelines for seat belt studies of 2.5%. The rate for male and female distracted drivers was estimated to be 13.6% and 18.5%, respectively.

Talking on cell phones was the most frequently occurring distraction at 7.4% of the drivers observed. Drinking/eating was the second most common distraction (2.8%) with texting (1.7%) and smoking (1.6%) ranking third and fourth.

While the rank order of the types of distractions was not that much different between males and females, the overall difference in percentages of distracted drivers was statistically significant (13.6% males vs. 18.5% females). Although women generally use seat belts with greater regularity than men, they also talk on the cell phone, text, and eat/drink while driving more frequently than men. Smoking while driving was the same for men and women (1.6%); however, it ranked third among distractions for men and fourth for women.

The fact that 83.9% of distracted drivers were wearing seat belts in this study indicated that wearing a seat belt does not necessarily correlate to other safe driving behaviors. However, there may be some evidence that people who do not wear seat belts are more likely to engage in other unsafe practices such as driver distractions. There is need for further research to confirm this postulate.

When the 15.6% ratio of distracted drivers is translated into absolute numbers, the potential dangers become more obvious. There are approximately three million licensed drivers in the State of Colorado. When out-of-state visitors and tourists are included in the number of drivers in the state and the total vehicle miles are factored into this equation, the issues associated with distracted drivers are exacerbated.

It is clear that the use of cell phones is the number one distraction and that continued educational efforts are needed. However, it is also important that other distractions are focused upon as many of them contribute to serious accidents. There is much more that needs to be learned about distracted driving in terms of frequency and the level of attention diversion for the various distractions. As with seat belt usage, the improvements in vehicle occupant safety and the reduction in the number of accidents caused by driver distraction will accompany educational efforts.